CATERPILLAR®

SEBP1982-02
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Parts Manual

428B Backhoe Loader

7EJ1-5999 (Machine)

Powered by 3054 Diesel Engine

MACHINE IDENTIFICATION
Caterpillar machines are identified with SERIAL NUMBERS and/or PRODUCT IDENTIFICATION NUMBERS (PIN) These numbers are assigned to the chassis and to the engine The chassis and the engine also carry ARRANGEMENT NUMBERS and in some cases MODIFICATION NUMBERS These numbers are shown on the SERIAL NUMBER or PIN plates and on the MASTER PLATE in the operator's compartment

Caterpillar dealers need all of these numbers to determine which components were included on the machine when it was assembled at the factory This permits accurate identification of replacement part numbers

ORDERING PARTS
Quality Caterpillar Replacement parts are available from Caterpillar dealers throughout the world Their parts inventories are up to date and include all parts normally required to protect your investment in Caterpillar machines Some dealers may offer repair kits, exchange components or remanufactured parts to allow selection of the most effective repair alternative for a specific situation When ordering parts, your order should specify the quantity, part number, part name and the serial number/product identification number

HOW TO USE THE PARTS MANUAL
Caterpillar Parts Manuals include illustrations of the groups or assemblies which make up the machine These illustrations show the standard components and many of the attachments for each machine

The maintenance part index located in the front of the manual references most frequently used maintenance part numbers with description, quantity, where used and page number The alphabetical index also located in the front of the manual should be used to determine the page number on which specific illustrations are shown Reference to those pages will identify each of the individual serviceable parts A numerical index listing each part number and the corresponding page number (s) appears in the back of the manual

Captions
The caption under each illustration identifies the part number and name of the group or assembly shown Part numbers of groups are shown for reference purposes Your Caterpillar dealer can help you identify the availability of a complete group If more than one illustration is included for any group, the caption identifies the specific machine serial numbers to which each illustration applies In some cases it is not possible to determine the specific machine serial numbers to which different illustrations are applicable In those cases the caption identifies the illustration as "TYPE 1", "TYPE 2", etc Reference to the actual group or assembly is necessary in those cases to determine which illustration should be used Captions provide additional information such as page number references to separate illustrations, quantities used and other informational assistance for the user to determine parts needs

Abbreviations and Symbols
O D OUTSIDE DIAMETER
I D INSIDE DIAMETER
A NOT PART OF THIS GROUP
B USE AS REQUIRED
C CHANGE FROM PREVIOUS TYPE
D ORDER BY THE METER
E ORDER BY THE CENTIMETER
F NOT SHOWN
G ORDER BY THE INCH
I SEE HOSE FABRICATION GUIDE
M METRIC PART
R REMFG PART MAY BE AVAILABLE
Y SEPARATE ILLUSTRATION
Z NOT SERVICED SEPARATELY

Illustration Reference Letters
When necessary, illustrations contain reference letters (A, B, C etc) that are intended to track lines and harnesses from one point to another They are also used to show where to reconnect illustrations that have been separated

Ref No
The numbers shown in this column refer to the numbers shown within the illustration To identify any item within the illustration, first determine its reference number, then refer to the same number in the Ref No column for information regarding that part

Part Number
The identifying number of a part

Qty
The quantities shown in this column indicate the total number of that item used in this illustration

Part Name
Information in this column provides the name of the part as well as additional information such as size which further identifies the part

Indented Part Names
Within each illustration is a parts list identifying each serviceable part When a part name is indented, it is a part of the item under which it is indented

NOTE:
Continuing improvement and advancement of product design may cause changes to your machine which may not be included in this publication Each publication is reviewed and revised as required to update and include these changes in later editions

Whenever a question arises regarding your Caterpillar product or this publication, please consult your Caterpillar dealer for the latest available information

IDENTIFICATION DE LA MACHINE

Toutes les machines Caterpillar portent un NUMÉRO DE SÉRIE et un NUMÉRO D'IDENTIFICATION (PIN). Ces numeros s'appliquent au châssis et au moteur Le châssis et le moteur peuvent également recevoir des NUMÉROS DE VERSION et, dans certains cas, de MODIFICATION. Ces numeros figurent sur les plaques de serie ou d'identification et sur la plaque signalétique principale qui se trouve dans le poste de conduite.

Les concessionnaires Caterpillar doivent connaître tous ces numéros pour savoir quels composants ont éte employés lors du montage en usine et trouver plus facilement le numéro des pièces de rechange.

COMMANDE DE PIÈCES

Les concessionnaires Caterpillar fournissent dans le monde entier des pièces de rechange de qualité Caterpillar Leurs stocks de pieces sont constamment reapprovisionnés et comptent toutes les pièces nécessaires pour assurer la bonne marche de votre machine Caterpillar Certains concessionnaires proposent également des kits de reparation, des echanges standard ou des pièces renovees, ce qui permet de choisir la solution la plus économique dans une situation donnee. Lors des commandes de pieces, mentionner la quantite, le numero et la designation des pieces ainsi que le numero de serie.

UTILISATION DU CATALOGUE DE PIÈCES

Les Catalogues de pieces Caterpillar comportent des illustrations des groupes ou ensembles qui composent la machine. Ces illustrations representent les composants standard et nombre des accessoires disponibles.

Au début du catalogue figure un index de numéros des pièces plus frequemment utilisees pour l'entretien, avec leur description, quantite et numero de page. Un index alphabétique figurant aussi au début du catalogue, renvoie aux pages et illustrations correspondantes. Toutes les pieces du moteur avec leur numero figurent dans ces pages. Un index numerique de pieces detaillant chaque numéro de piece avec le numéro de page correspondante se trouve a la fin du catalogue.

Légendes

Chaque illustration comporte une legende comprenant le numero de piece et la designation du groupe ou celle de l'ensemble. Les numeros de groupe sont donnes a titre de reférence. Pour savoir si un groupe complet peut être commande, s'adresser au concessionnaire. Si a un groupe donne correspondent plusieurs illustrations, la legende indiquera le numero de serie de chaque machine specifique. Parfois, il n'est pas possible de savoir a quels numeros de serie specifiques de la machine se rapportent les différentes illustrations. Dans ce cas, les legendes comportent la mention "Type 1", "Type 2", etc. Pour determiner quelles illustrations utiliser, il faudra connaître la reférence du groupe ou de l'ensemble correspondant. Les legendes indiquent également les numeros de page des plans des sous-ensembles, les quantites utilisees et autres renseignements destines a aider l'utilisateur a determiner quelles sont les pieces necessaires.

Abréviations et symboles

O.D.	Diametre extérieur
I.D.	Diamètre interieur
A	Ne fait pas partie de ce groupe
B	Utiliser selon besoin
C	Modification
D	Commander par mètre
E	Commander par centimetre
F	Non représenté
G	Commander par pouce
I	Voir "Hose Fabrication Guide"
M	Pièce métrique (y compris fixations)
R	Piece rénovée eventuellement disponible
Y	Illustration séparée
Z	Non fourni séparement

Lettres de référence des illustrations

Quand il est nécessaire, les illustrations comportent des lettres de référence (A, B, C, etc.) pour montrer le trajet des lignes et faisceaux de câbles d'un point à l'autre. Elles sont utilisees également pour indiquer ou relier les illustrations séparees auparavant.

Ref No (No de réf.)

Les numeros figurant dans cette colonne renvoient aux numeros utilises dans l'illustration. Pour identifier une piece quelconque dans l'illustration, determiner en premier son numero de reférence, puis rechercher les renseignements sur cette pièce dans la colonne de numero de reférence.

Part Number (No de pièce)

Ces numeros identifient les pieces.

Qty (Quantité)

Les quantites qui figurent dans cette colonne indiquent le nombre de la piece concernee utilise.

Part Name (Désignation de la pièce)

Les renseignements figurant dans cette colonne indiquent le nom de la piece ainsi que des renseignements supplémentaires telles par exemple les dimensions, completant l'identification de la piece concernee.

Désignations de pièces en retrait

Chaque illustration comporte la liste des pieces qui la constituent et que l'on peut se procurer Lorsqu'une designation de piece est en retrait, cela veut dire que l'article en regard fait partie de l'ensemble sous lequel il figure.

NOTA:

En raison du progres technique et des améliorations continuelles apportees au materiel, votre machine comporte peut-être des modifications qui n'apparaissent pas dans la presente publication. Les editions ulterieures seront revues et corrigees en consequence.

En cas de doute sur un detail de votre machine Caterpillar ou sur le texte de la presente publication, adressez-vous a votre concessionnaire Caterpillar

MAQUINAS

Las máquinas Caterpillar se identifican con NUMEROS DE SERIE y/o NUMEROS DE IDENTIFICACION DEL PRODUCTO (PIN) Estos numeros son asignados al chasis y al motor, respectivamente El chasis y el motor tienen también NUMEROS DE DISPOSICION, y en algunos casos, NUMEROS DE MODIFICACION Estos numeros están en la placa del numero de serie del motor o en la placa principal en la cabina del operador

Los distribuidores Caterpillar necesitan estos numeros para determinar con qué componentes se armó la máquina en la fábrica Esto permite una identificación exacta de los numeros de pieza de repuesto

COMO PEDIR REPUESTOS

Piezas de repuesto Caterpillar de calidad están disponibles de los distribuidores Caterpillar en todo el mundo Sus existencias actualizadas incluyen todas las piezas normalmente requeridas para proteger su inversión en máquinas Caterpillar Algunos distribuidores pueden tener juegos de reparación, componentes de intercambio o piezas remanufacturadas, para permitir la selección de la mejor alternativa de reparación de un caso en particular Al pedir piezas de repuesto, especifique en su pedido la cantidad, el numero de pieza, el nombre de la pieza y el numero de serie Si tiene duda del numero de pieza, déle al distribuidor una descripción completa de la misma

COMO USAR ESTE CATALOGO

Los Catálogos de Piezas Caterpillar tienen ilustraciones de los grupos o conjuntos que componen la máquina Estas ilustraciones muestran los componentes estándar y muchos de los accesorios disponibles para la máquina

Al frente de este catálogo se encuentra un índice de los numeros de piezas utilizadas más frecuentemente para el mantenimiento, que incluye descripción, cantidad necesaria y numero de página El índice alfabético, igualmente al frente de este catálogo, se debe usar para determinar el numero de página donde se encuentran ilustraciones específicas Dichas páginas identifican las piezas utilizables Un índice numérico de piezas con el correspondiente numero de página aparece al final de este catálogo

Títulos

El título debajo de cada ilustración identifica el numero de pieza y el nombre del grupo o del conjunto indicado Los numeros de pieza de grupos se muestran para referencia Su distribuidor Caterpillar puede ayudarle a identificar la disponibilidad de un grupo completo Si se incluye más de una ilustración de cualquier grupo, el título identifica numeros de serie de las máquinas correspondientes a cada ilustración En algunos casos no es posible determinar los numeros de serie de las máquinas correspondientes a las diferentes ilustraciones En esos casos, el título identifica la ilustración como "Tipo 1", "Tipo 2", etc Es necesario referirse al grupo o conjunto en sí para determinar cuál ilustración se debe utilizar Los títulos proveen información adicional los numeros de las páginas en que aparecen las ilustraciones de los subconjuntos, las cantidades utilizadas y demás información para ayudar al usuario a determinar las piezas necesarias

Abreviaturas y símbolos

O D	Diámetro exterior
I D	Diámetro interior
A	No es pieza de este grupo
B	Utilizado segun la demanda
C	Indica cambio
D	Se pide por metro
E	Se pide por centímetro
F	No se muestra
G	Se pide por pulgada
I	Ver "Hose Fabrication Guide"
M	Pieza métrica (Incluso tornillería)
R	Puede estar disponible como pieza remanufacturada
Y	Ilustración separada
Z	No se suministra por separado

Letras de referencia de ilustraciones

Las ilustraciones contienen algunas veces letras de referencia (A, B, C, etc) cuyo propósito es seguir el trayecto de líneas y mazos de cables de un punto a otro También se utilizan para mostrar dónde volver a unir ilustraciones que se habían separado

No. de Referencia

Los numeros en esta columna se refieren a los numeros en la ilustración Para obtener información acerca de una pieza en la ilustración, determine primero el numero de referencia y después refiérase al mismo numero en la columna "No de Referencia"

No. de Pieza

Estos numeros se utilizan para identificar piezas

Cantidad

Las cantidades en esta columna indican el numero de esa(s) pieza(s) utilizada(s)

Nombre de Pieza

La información en esta columna proporciona el nombre de la pieza, tamaño y cualesquiera otra información que ayude a identificar la pieza misma

Nombres de Pieza sangrados

En cada ilustración hay una lista de piezas que identifica las piezas utilizables en la ilustración Cuando el nombre de una pieza está sangrado en esta lista, significa que esta pieza forma parte de la pieza utilizable inmediatamente arriba

NOTA:

Las continuas mejoras y adelantos en diseño podrían originar cambios a su máquina que no se incluyan en esta publicación Cada publicación es analizada y revisada para actualizar e incluir estos cambios en ediciones subsecuentes

Cuando tenga alguna pregunta acerca de su producto Caterpillar o de esta publicación, consulte al distribuidor Caterpillar para obtener la información más reciente

IDENTIFICAÇÃO DA MÁQUINA

As máquinas Caterpillar são identificadas pelos NÚMEROS DE SÉRIE e/ou NÚMERO DE IDENTIFICAÇÃO DO PRODUTO (PIN) Esses numeros são atribuídos ao chassí e ao motor O chassí e o motor recebem, também, NÚMEROS DE ARRANJO e, em alguns casos, NÚMEROS DE MODIFICAÇÃO. Esses numeros aparecem nas placas de NÚMERO DE SÉRIE ou PIN e na PLACA MESTRE no compartimento do operador

Os revendedores Caterpillar necessitam desses numeros para determinar quais componentes foram incluídas na máquina durante a montagem na fábrica Isso permite uma identificação precisa dos numeros de peça de reposição

COMO OBTER PEÇAS

As Peças de Reposição de Qualidade Caterpillar estão disponíveis nos revendedores Caterpillar no mundo inteiro Seus estoques de peças são atualizados e incluem todas as peças normalmente necessárias para proteger seu investimento nas máquinas Caterpillar Alguns revendedores podem ter jogos de reparo e peças de troca/remanufaturadas disponíveis, como uma opção Ao fazer um pedido de peças, especifique a quantidade, o numero e o nome da peça, o numero de série ou PIN

COMO USAR O MANUAL DE PEÇAS

Os Manuais de Peças Caterpillar incluem ilustrações dos grupos ou conjuntos que compõem a máquina Essas ilustrações mostram os componentes padrão e muitos dos acessórios disponíveis para a máquina

O índice de peças de manutenção localizado na frente do manual indica os numeros das peqs mais utilizadas com a descrição, quantidade, localização de uso e o numero de página O índice alfabético, no início do catálogo, deve ser usado para determinar o numero da página em que se encontra determinada ilustração Consultando tais páginas, você identificará cada uma das peças disponíveis, individualmente Existe no fim do livro um índice numérico de cada numero de peça e o(s) numero(s) correspondente(s) da(s) página(s)

Legendas

A legenda de cada ilustração identifica o numero da peça e o nome do grupo ou do conjunto mostrado Os numeros de peças para grupos são indicados para fins de referência O seu Revendedor Caterpillar pode fornecer assistência para identificar a disponibilidade de um grupo completo Se for incluída mais de uma ilustração para qualquer grupo, a legenda indicará os numeros de série da máquina específica a que cada ilustração se aplica Em alguns casos, não é possível determinar os numeros de série da máquina específica a que as diferentes ilustrações se aplicam Em tais casos, a legenda identifica a ilustração como "Tipo 1", "Tipo 2", etc Será, então, necessário referir-se ao conjunto ou grupo real para determinar qual ilustração deverá ser usada As legendas fornecem informações adicionais, tais como numeros das páginas onde são mostradas as ilustrações de subconjuntos, informações referentes às quantidades usadas e outras informações que se destinam a auxiliar o usuário a determinar as peças necessárias

Abreviaturas e Símbolos

O D "Outside Diameter" (Diâmetro Externo)
I D "Inside Diameter" (Diâmetro Interno)
A Não faz parte deste grupo
B Use conforme necessário
C Indica modificação
D Vendido por metro
E Vendido por centímetro
F Não mostrado
G Vendido por polegada
I Veja o "Guia de Fabricação de Mangueiras" (Hose Fabrication Guide)
M Peça métrica (inclusive fixadores)
R Peça remanufaturada Pode estar disponível Consulte o seu Revendedor Caterpillar
Y Ilustração separada
Z Não disponível separadamente

Letras de Referência nas Ilustrações

Quando necessário, as ilustrações contêm letras de referência (A, B, C, etc) que são utilizados para seguir tubulações e cabos elétricos de um ponto para um outro Também foram utilizados para indicar onde se pode reconectar as ilustrações que foram separadas

Ref No (Numero de Refêrencia)

Os numeros indicados nesta coluna se referem aos numeros mostrados na ilustração Para identificar qualquer item dentro da ilustração, primeiro determine seu No de Ref , então refere ao mesmo numero na coluna para informação referente à peça

Part Number (Numero de Peça)

Tais numeros são usados para identificar as peças

Qty (Quantidade)

As quantidades indicadas nesta coluna indicam o numero de uma determinada peça utilizada

Part Name (Nome de Peça)

A informação contida nesta coluna proporciona o nome da peça tanto quanto informação adicional tal como a dimensão, que ajuda identificar a peça

Nomes de Peças Desalinhados

Cada ilustração apresenta uma lista de peças que identifica cada peça disponivel na ilustração Quando um nome de peça está desalinhado na lista, significa que tal item é disponivel e faz parte do item disponivel anterior

Nota: Os contínuos aperfeiçoamentos e avanços no projeto do produto podem ocasionar modificações em sua máquina, que ainda não estejam incluídas nesta publicação Cada publicação é revisada e corrigida, conforme necessário, para atualizar e incluir essas modificações nas edições mais recentes

Sempre que surgir uma questão concernente ao seu produto Caterpillar ou a esta publicação, consulte o seu revendedor Caterpillar quanto às mais recentes informações disponíveis

This is the sample of the manual

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GERÄTEKENNZEICHNUNG

Caterpillar-Geräte sind mit SERIAL NUMBERS und/oder PRODUCT IDENTIFICATION NUMBER (PIN) (Serien-Nr und/oder Produktidentifizierungs-Nr) gekennzeichnet Diese Nummern dienen zur Kennzeichnung des Laufwerks und des Motors Am Laufwerk und am Motor befinden sich außerdem ARRANGEMENT NUMBERS (Ausrüstungsnummern) sowie in einigen Fällen auch MODIFICATION NUMBERS (Änderungsnummern) Sie befinden sich auf den Typen- oder PIN-Schildern sowie auf dem HAUPTSCHILD im Fahrerhaus

Die authorisierten Händler benötigen alle genannten Nummern, um feststellen zu können, welche Baugruppen bei der Montage des Geräts im Werk eingebaut wurden Nur mit Hilfe dieser Angaben lassen sich die Bestellnummern der benötigten Ersatzteile genau bestimmen

BESTELLEN VON ERSATZTEILEN

Original Caterpillar-Ersatzteile können bei authorisierten Händlern überall auf der Welt bestellt werden Ihre umfangreichen Lager enthalten normalerweise alle Teile, die Sie für Ihr Caterpillar-Gerät benötigen Einige Händler bieten Reparatursätze, Austausch- oder werküberholte Teile an, so daß Sie die Auswahl unter verschiedenen Reparaturmöglichkeiten treffen können Ihre Bestellung muß folgende Angaben enthalten Anzahl der benötigten Teile, Bestellnummer, Bezeichnung des Teils, Serien-Nr , Ausrüstungs-Nr und Änderungs-Nr des Geräts, für das die Teile benötigt werden Wenn Sie Zweifel hinsichtlich der richtigen Bestell-Nr haben, geben Sie dem Händler eine möglichst genaue Beschreibung des benötigten Teils

HINWEISE ZUR BENUTZUNG DES PARTS BOOKS

Die Caterpillar-Ersatzteilbücher enthalten Zeichnungen der Gruppen oder Teile des Geräts Gezeigt werden die Standardteile sowie verschiedenes Zubehör für die Geräte

Anhand des Index vorn im Buch können Sie die Nummer der Seite heraussuchen, auf der sich die von Ihnen gesuchte Abbildung befindet Beim Aufschlagen der betreffenden Seite können dann alle gesuchten Teile identifiziert werden Hinten im Buch befindet sich ein numerischer Index, mit allen Bestell-Nr und dem Hinweis auf die Seite, auf der sich die entsprechenden Zeichnungen befinden

Bildunterschriften

Die Zeilen unter jeder Abbildung enthalten die Bestell-Nr der gezeigten Baugruppen Die Nummer wird nur als Referenz aufgeführt Ihr Caterpillar-Händler kann Ihnen sagen, ob eine Gruppe komplett lieferbar ist Wenn für eine Gruppe mehrere Zeichnungen vorhanden sind, enthalten die Zeilen unter den Zeichnungen die Seriennummern, denen jede Zeichnung entspricht In einigen Fällen ist es nicht möglich, die Serien-Nr anzugeben, auf die sich die Zeichnungen beziehen In diesem Fall wird lediglich "Typ 1", "Typ 2" usw angegeben Hier ist ein Hinweis auf die Baugruppe erforderlich, um anzuzeigen, welche Abbildung verwendet werden muß Die Zeilen unter den Abbildungen enthalten ferner Angaben über die Seiten, auf denen sich Zeichnungen von Unterbaugruppen und Anzahl der benötigten Teile sowie andere Angaben befinden, die es dem Benutzer des Buchs erleichtern, die gewünschten Teile zu identifizieren

Abkürzungen und Symbole

O D	Außendurchmesser
I D	Innendurchmesser
A	kein Teil dieser Gruppe
B	nach Bedarf verwenden
C	Hinweis auf eine Änderung
D	in Meter-Länge bestellen
E	in Zentimeter-Länge bestellen
F	nicht gezeigt
G	in Zoll-Länge bestellen
I	Siehe "Hose Fabrication Guide"
M	metrisches Teil
R	werküberholtes Teil unter Umständen lieferbar
Y	separate Abbildung
Z	nicht einzeln erhältlich

Referenzbuchstaben

Falls erforderlich sind in den Zeichnungen Referenzbuchstaben enthalten (z B A, B, C, usw), die Leitungen und Kabelbäume von einem Punkt zum andern verfolgen Außerdem geben sie die Stelle an, an der getrennte Zeichnungen fortgesetzt werden

Ref No (Referenz-Nr.)

Die in dieser Spalte aufgeführten Nummern beziehen sich auf die in der Zeichnung befindlichen Nummern Zum Identifizieren eines Teils in der Zeichnung zuerst dessen Referenz-Nr feststellen und diese dann in der Spalte "Ref No" aufsuchen, um weitere Angaben zum gesuchten Teil zu erhalten

Part Number (Bestell-Nr)

Anhand dieser Nummern lassen sich die Teile identifizieren

Qty (Anzahl)

Die Zahlen in dieser Spalte geben an, wieviele der entsprechenden Teile benötigt werden

Part Name (Bezeichnung)

In dieser Spalte wird die Bezeichung der betreffenden Teile zusammen mit zusätzlichen Informationen angegeben, z B Größe, die das Identifizieren erleichtern

Eingerückte Bezeichnungen

In der zu jeder Abbildung gehörenden Ersatzteilliste sind manche Bezeichnungen eingerückt Dadurch wird angezeigt, daß das entsprechende Teil zu dem gehört, unter dessen Bezeichnung es eingerückt ist

ANMERKUNG:

Ständig vorgenommene Verbesserungen und Weiterentwicklungen an Ihrem Gerät können Änderungen verursachen, die in der vorliegenden Ausgabe noch nicht berücksichtigt sind Sie werden jedoch in später folgenden Ausgaben erscheinen

Fragen zu Ihrem Caterpillar-Gerät oder diesem Ersatzteilbuch beantwortet Ihr Caterpillar-Händler

REMANUFACTURED COMPONENTS

As an option when making repairs consider Caterpillar Remanufactured Components. Components that are available through the Caterpillar Remanufactured Program are identified three ways in the parts book:

- with the letter R in the note field of the parts list
- with an R* at the beginning of the first line of the caption
- with an *R at the end of the first line of the caption

Typical components included in the Remanufacturing Program include:

ALTERNATORS
CONNECTING RODS
CRANKSHAFTS - UNDERSIZE
CRANKSHAFTS - UPGRADE TO NEW
CYLINDER HEADS
ELECTRONIC CONTROL MODULES (ECM)
ELECTRONIC SENSORS
FUEL INJECTORS
FUEL NOZZLES
FUEL PUMPS
GOVERNORS
OIL PUMPS
PISTONS
SHORT BLOCKS
STARTERS
TURBOCHARGERS - COMPLETE
TURBOCHARGER CARTRIDGES
WATER PUMPS

Caterpillar Remanufactured engines for many engine arrangements are also available. Check with your local Caterpillar Dealer for the availability of Remanufactured Components.

SUPPLEMENTAL COOLANT ADDITIVE ELEMENTS

... Conveniently prevents corrosion, cavitation and erosion in cooling system

Customer Benefits:

Protects against cavitation, foam, corrosion, and scale build-up
- Provides measured coolant conditioner

Description:

Supplemental coolant additive is now available in spin-on type elements for all diesel engines except 3500 and 3600 engines (use liquid only). The elements contain a dry corrosion inhibitor which dissolves in the coolant The inhibitor protects against cavitation, corrosion, foam and scale, reducing and eliminating pitting of cylinder liner surfaces and cylinder blocks. This protection extends the life of cylinder liners, blocks and water pumps.

Two types of coolant additive elements are available, a precharge element and maintenance element. These elements contain a premeasured amount of inhibitor, which is distributed into the cooling system. When correctly used, the precharge element will keep the cooling system inhibitor at an acceptable level during the first maintenance interval after the system is filled with new coolant. Use precharge element only when not using Caterpillar Antifreeze, which contains conditioner. The maintenance element is used to keep the inhibitor at the correct level in the system after the first (precharge) maintenance interval. The test kit (8T5296) should be used to evaluate the concentration of the Caterpillar Supplemental Coolant Additive at each oil change. Normal coolant additive elements should be changed at every oil change interval, but periodic adjustments may be required for over or under additive concentration The entire coolant system should be drained and flushed every two years or 3000 hours of operation.

Note: The coolant additive elements can be used with any ethylene or propylene glycol type antifreeze which meet ASTM D4985 Specification or have similar low additives which allow supplemental additive use

Parts Needed:

Cooling System Capacity Gallons	Cooling System Capacity Liters	Base Assembly	Valve Assembly	Precharge Element	Maintenance Element	Maintenance Period (Hrs)
6-8	22-32	9N3668(1)	9N3666(2)	9N6123(1)	9N3717(1)	500
9-12	33-47	9N3668(1)	9N3666(2)	9N6123(1)	9N3718(1)	500
* 9-12	33-47	9Y3205(1)	9N3666(1)	7E6013(1)	7E6014(1)	250
13-16	48-62	9N3668(1)	9N3666(2)	9N3366(1)	9N3717(1)	250
17-22	63-85	9N3668(1)	9N3666(2)	9N3367(1)	9N3368(1)	250
22-30	86-115	9N3668(1)	9N3666(2)	9N3367(1)	9N3718(1)	250
31-43	116-165	9N3668(2)	9N3666(2)	9N3367(2)	9N3368(2)	250
or						
31-43	116-165	9N3668(1)	9N3666(2)	1W5518(1)	9N6123(1)	250
44-65	166-247	9N3668(2)	9N3666(2)	1W5518(2)	9N3718(1)	250

* 3176 Engines Only

MAINTENANCE PARTS

DESCRIPTION	PART NO.	QTY	WHERE USED	PAGE NO.
BATTERY-MAINTENANCE FREE	3T5760	1	BATTERY & WIRING GP	79
		1	BATTERY & WIRING GP	83.02
		1	BATTERY & WIRING GP	83.08
		1	BATTERY & WIRING GP	83.14
BATTERY-MAINTENANCE FREE (12 VOLT)	3T5760	1	BATTERY & WIRING GP	83.20
		2	BATTERY GP	84
BLADE AS-WIPER	6V5849	1	WIPER GP-WINDSHIELD	315
		1	WIPER GP	319
BLADE-WIPER	5C8813	1	WIPER GP-WINDSHIELD	313
BREATHER	7T3251	1	TRANSMISSION GP	115
		1	TRANSMISSION GP	119.02
		1	TRANSMISSION GP-DIRECT DRIVE	121
		1	TRANSMISSION GP-DIRECT DRIVE	127.02
CAP	6I0513	1	FILLER GP-OIL	33
CAP-FILLER	7H1447	1	TANK GP-HYDRAULIC	241
CAP-FUEL TANK VENTED	7X2644	1	TANK GP-FUEL	67
		1	TANK GP-FUEL	67.02
		1	TANK GP-FUEL	67.04
		1	TANK GP-FUEL	67.06
CAP-FUSE HOLDER	7N2867	1	WIRING GP-POWER RECEPTACLE	106.02
ELEMENT	1005593	1	FILTER GP-FUEL	77
ELEMENT AS-PRIMARY	8N5504	1	AIR CLEANER GP	53
ELEMENT AS-SECONDARY	7W6754	1	AIR CLEANER GP	53
FILTER	1028475	1	AIR CONDITIONER GP	299.04
		1	AIR CONDITIONER GP	299.08
	9R9925	1	TANK GP-HYDRAULIC	241
FILTER (RECIRCULATION)	7T3549	1	HEATER GP-CAB	293
FILTER AS	1013738	1	FILTER GP-FUEL	77
FILTER AS-ENGINE OIL	7W2326	1	COOLER GP-FLTR BASE & ENG OIL	49
	7W2327	1	FILTER GP-ENGINE OIL	34
FILTER-AIR	7T3519	1	HEATER GP-CAB	291
FILTER-FUEL	9R5895	1	TANK GP-FUEL	67
		1	TANK GP-FUEL	67.02
		1	TANK GP-FUEL	67.04
		1	TANK GP-FUEL	67.06

MAINTENANCE PARTS

DESCRIPTION	PART NO.	QTY	WHERE USED	PAGE NO.
FILTER-OIL	6E0924	1	TRANSMISSION GP	115
		1	TRANSMISSION GP-DIRECT DRIVE	121
FLASHER	7T4848	1	BATTERY & WIRING GP	81
		1	BATTERY & WIRING GP	83.04
		1	BATTERY & WIRING GP	83.10
		1	BATTERY & WIRING GP	83.16
		1	BATTERY & WIRING GP	83.22
		1	BATTERY & WIRING GP	83.28
FUSE	3K8782	1	AIR CONDITIONER GP	299.06
	8M0456	1	AIR CONDITIONER GP	299.06
	9W1442	7	BATTERY & WIRING GP	83.16
FUSE (10 AMP)	3K8782	1	AIR CONDITIONER GP	299.02
FUSE (10 AMP)	9W1442	8	BATTERY & WIRING GP	81
		8	BATTERY & WIRING GP	83.04
		8	BATTERY & WIRING GP	83.10
		7	BATTERY & WIRING GP	83.22
		7	BATTERY & WIRING GP	83.28
		1	WIRING GP-WIPER	333
		1	WIRING GP-WIPER	333.01
		8	INSTRUMENT GP	373
FUSE (15 AMP)	9W1441	2	BATTERY & WIRING GP	81
		2	BATTERY & WIRING GP	83.04
		2	BATTERY & WIRING GP	83.10
		2	BATTERY & WIRING GP	83.16
		2	BATTERY & WIRING GP	83.22
		2	BATTERY & WIRING GP	83.28
		1	WIRING GP-POWER RECEPTACLE	100
		1	WIRING GP-WIPER	333
		1	WIRING GP-WIPER	333.01
		2	INSTRUMENT GP	373
FUSE (20 AMP)	8M0456	1	AIR CONDITIONER GP	299.02
FUSE (20 AMP)	9W1446	1	BATTERY & WIRING GP	81
		2	BATTERY & WIRING GP	83.04
		2	BATTERY & WIRING GP	83.10
		2	BATTERY & WIRING GP	83.16
		2	BATTERY & WIRING GP	83.22
		2	BATTERY & WIRING GP	83.28
		1	WIRING GP-WIPER	333
		1	WIRING GP-WIPER	333.01
		1	INSTRUMENT GP	373
FUSE (5 AMP)	2S6024	1	WIRING GP-POWER RECEPTACLE	106.02
INDICATOR-AIR FILTER SERVICE (AIR FILTER SERV)	1W0613	1	INSTRUMENT GP	373
		1	INSTRUMENT GP	373.02
LAMP	9W0607	1	LIGHTING GP-WORKING	89

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		1	LIGHTING GP-WORKING	90.01
		1	LIGHTING GP-WORKING	91
		1	LIGHTING GP-WORKING	91.01
		1	LIGHTING GP-WORKING	91.02
LAMP (AMBER)	3C4883	1	LIGHTING GP-ROADING	93
LAMP (RED)	3C6516	1	LIGHTING GP-ROADING	93
LAMP-HEAD	9W3324	1	LAMP GP-HEAD & TURN	95
		1	LAMP GP-HEAD & TURN	96
LAMP-MINIATURE	5M8034	1	LIGHTING GP-SIGNAL	97
	7S1800	1	LIGHTING GP-SIGNAL	97
	8L9801	7	BATTERY & WIRING GP	81
		3	BATTERY & WIRING GP	83.04
		3	BATTERY & WIRING GP	83.10
		9	BATTERY & WIRING GP	83.16
		9	BATTERY & WIRING GP	83.22
		9	BATTERY & WIRING GP	83.28
	8M6176	5	BATTERY & WIRING GP	81
		11	BATTERY & WIRING GP	83.04
		11	BATTERY & WIRING GP	83.10
		5	BATTERY & WIRING GP	83.16
		5	BATTERY & WIRING GP	83.22
		5	BATTERY & WIRING GP	83.28
		1	LIGHTING GP-ROADING	93
		1	WIRING GP-FRONT	163
REGULATOR-TEMPERATURE	4W8063	1	LINES GP-WATER	44
SEAL	1013743	1	FILTER GP-FUEL	77
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